

# Fortinet Antennas

Fortinet offers directional, sector and omnidirectional antenna options for its Fortinet access point family of products which help to optimize coverage and performance in various demanding environments. These antenna systems may be comprised of numerous components, including the antenna, mounting hardware, connectors and antenna cabling.



## Product Offerings

<b>FAN-612R</b>	Sector/Patch	Outdoor
<b>FAN-612N</b>	Sector/Patch	Outdoor
<b>FAN-500N</b>	Point-to-Point	Outdoor
<b>FAN-504N</b>	Point-to-Point	Outdoor
<b>FAN-614R</b>	Sector/Patch	Outdoor
<b>FAN-664N</b>	Sector/Patch	Outdoor
<b>ANT-6ABGN-24</b>	Omnidirectional	Indoor/Ceiling
<b>ANT-ABGN230-W</b>	Omnidirectional	Indoor
<b>ANT-I3ABGN-0304-O</b>	Omnidirectional	Indoor/Ceiling
<b>ANT-O6ABGN-0606-O</b>	Omnidirectional	Outdoor
<b>ANT-O6ABGN-0607-PT</b>	Sector/Patch	Outdoor
<b>ANT-A080-NM-2</b>	Omnidirectional	Outdoor
<b>ANT-BG080-NM</b>	Omnidirectional	Outdoor

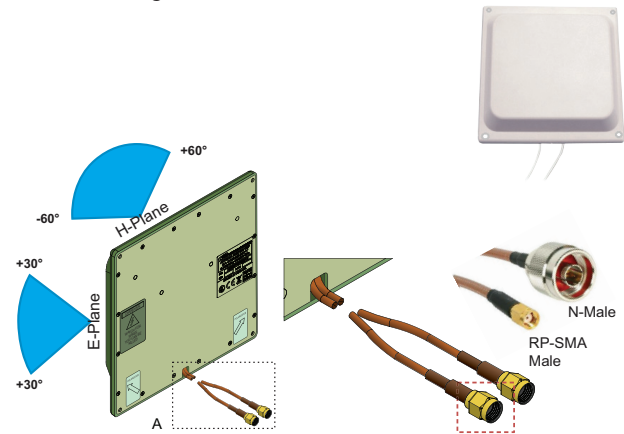
## HIGHLIGHTS

### FortiAntenna 612R and FortiAntenna 612N 120° Sector

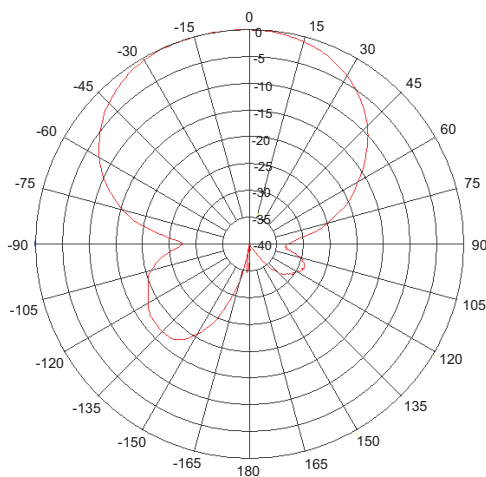
FortiAntenna 612R and FortiAntenna 612N are a dual-band 2-element 120° sector antenna for use in 802.11n and 802.11ac MIMO applications. The antenna provides coverage of 2.4–2.5 GHz and 4.9–5.9 GHz in a single antenna radome. The lightweight and durable construction and UV-protected radome made of plastic allow both indoor and outdoor installation. Usage scenarios include:

- This antenna is also suitable for coverage of large rectangular areas like shopping centers, courtyards and hallways.
- Two FortiAntenna 612R can be used with any AP with RP-SMA connectors like FAP-223C to provide full dual-band dual-radio 802.11a/b/g/n MIMO coverage. Outdoor coverage can be provided by placing FAP-223C indoor and the antenna outdoor on the opposite side of the wall such as shown in the diagram.

- FortiAntenna 612N has N-type connector and can be used with any outdoor AP with two N-Type connectors such as the FAP-222C to provide full dual-band dual-radio 802.11a/b/g/n/ac MIMO coverage.

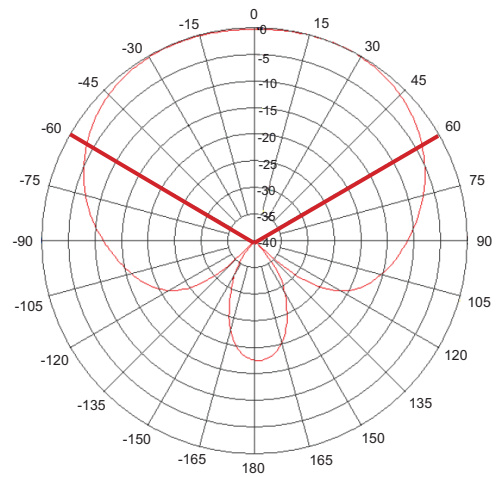


**E-Plane Pattern**

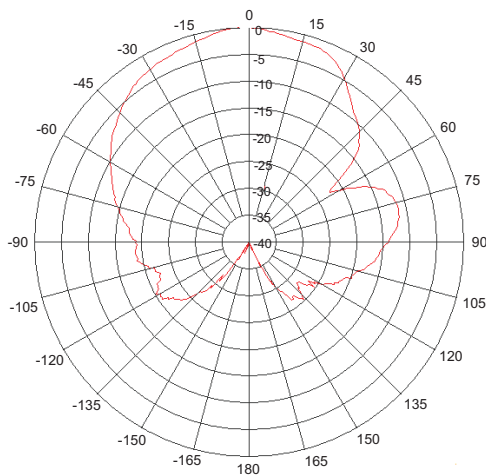


**Frequency  
2500 MHz**

**H-Plane Pattern**

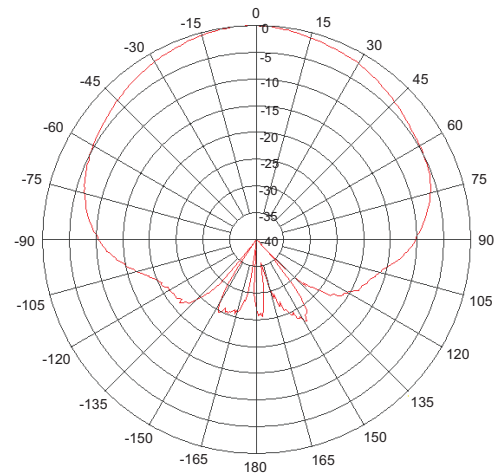


**E-Plane Pattern**



**Frequency  
5500 MHz**

**H-Plane Pattern**



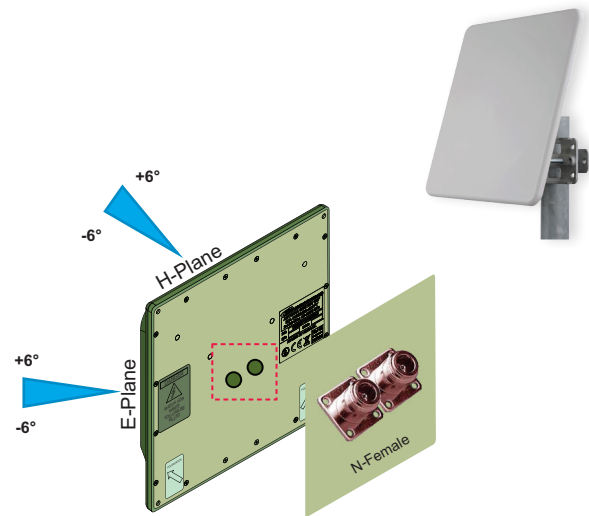
## HIGHLIGHTS

### FortiAntenna 500N and 504N Point-to-point

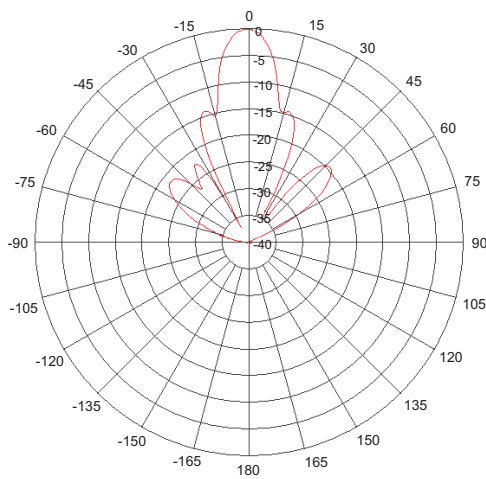
FortiAntenna 500N and 504N are single-band 12° point-to-point antennas for use in 802.11n and 802.11ac MIMO applications for building to building bridging such as fiber replacement applications. The antenna provides coverage of 4.9–5.9 GHz in a single antenna radome suitable for full 160 MHz operations with Wave-2 access points. The lightweight and durable construction and UV-protected radome made of plastic allow both indoor and outdoor installation. Usage scenarios include:

- FAN-500N designed for 2x2 MIMO applications such as FAP-222B and FAP-222C.
- FAN-504N designed for all new 4x4 MIMO FAPs.

*Note: Please purchase cable separately*

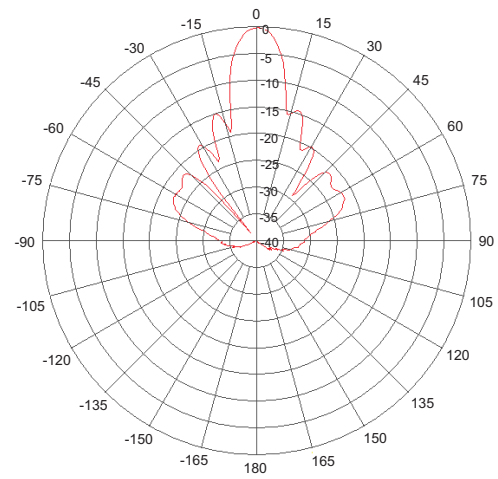


**E-Plane Pattern**



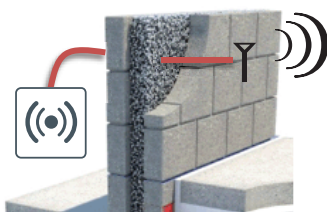
**Frequency  
5500 MHz**

**H-Plane Pattern**



### FortiAntenna M22

FAN-M22 is a versatile adjustable mount for use with the N-type antennas FortiAntenna 500N, 504N, 612N, 664N. The mount made of die-cast aluminum is suitable for pole and wall mounting.



## HIGHLIGHTS

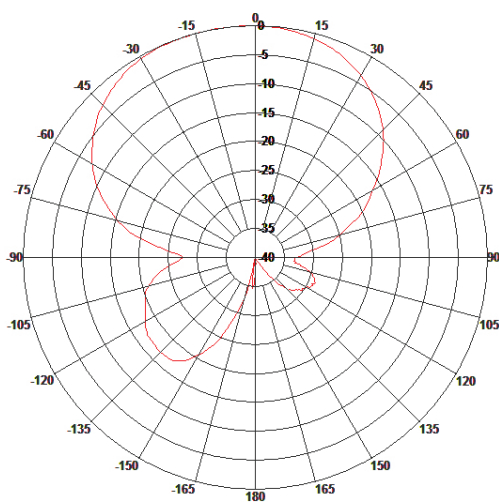
### FortiAntenna 614R 120° Sector

FortiAntenna 614R is a Directional 120° 5 dB wall mount outdoor 4x4 MIMO sector panel antenna that provides coverage of 2.3–2.7 GHz and 4.9–6.1 GHz in a single antenna radome.

This antenna has 4 RP-SMA connectors attached to 1.2 Meter cables.

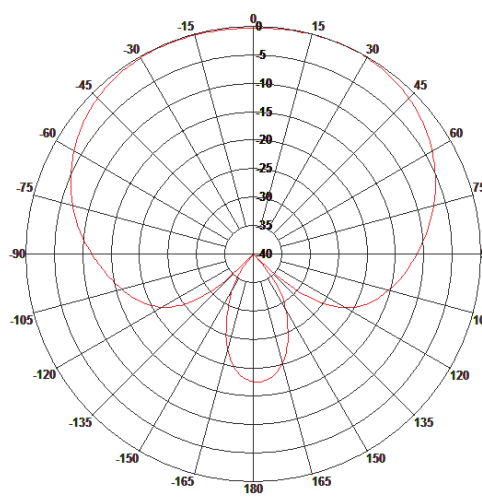


E-Plane Pattern

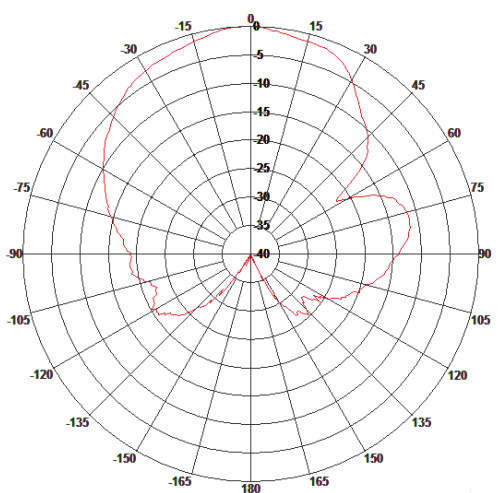


Frequency  
2500 MHz

H-Plane Pattern

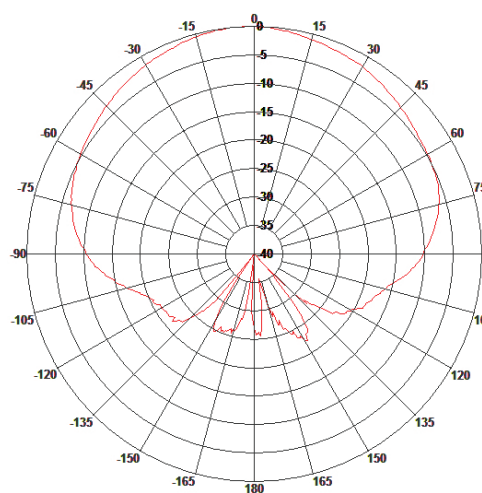


E-Plane Pattern



Frequency  
5500 MHz

H-Plane Pattern

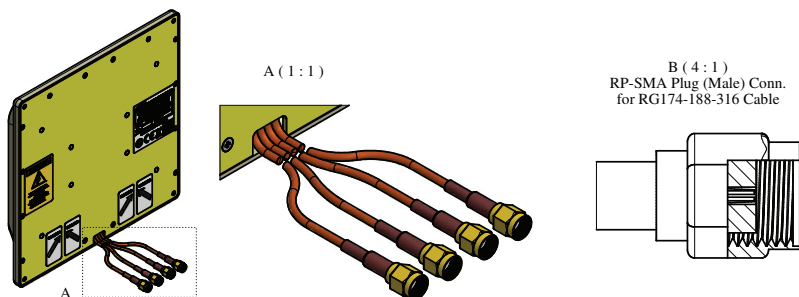


## HIGHLIGHTS

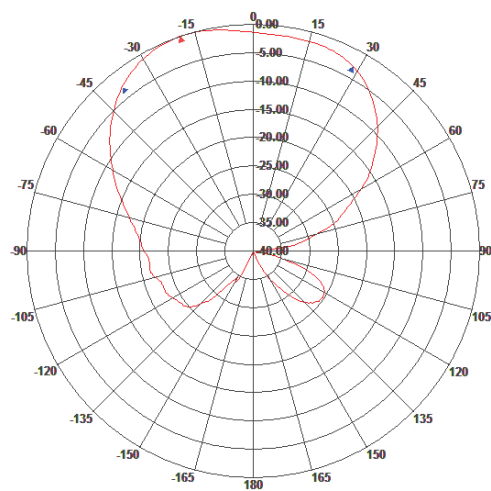
### FortiAntenna 664N 60° Sector

FortiAntenna 664N is a 60° 8 dB dual-band 4x4 MIMO Sector panel antenna with 4 N-type connectors that provide coverage of 2.4–2.5 GHz and 5.15–5.875 GHz in a single antenna radome.

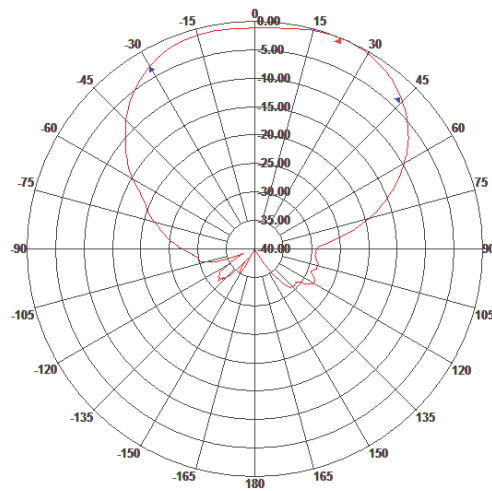
This antenna has 4 N-type connectors attached to 75 cm cables.



E-Plane Pattern

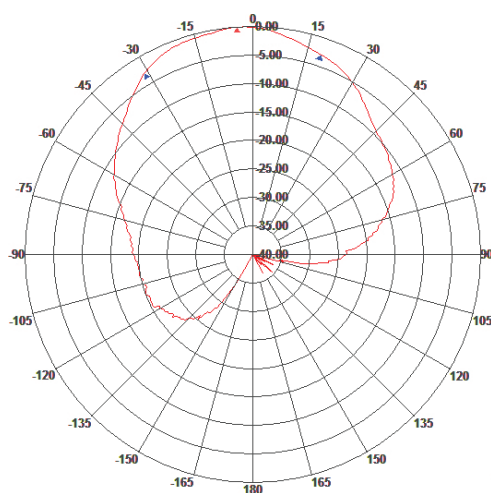


H-Plane Pattern

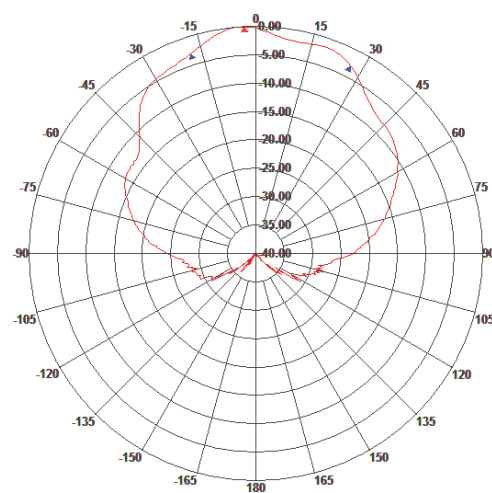


Frequency  
2450 MHz

E-Plane Pattern



H-Plane Pattern



Frequency  
5300 MHz

## HIGHLIGHTS

### ANT-6ABGN-24

#### Dual-band Mini MIMO Ceiling-Mount

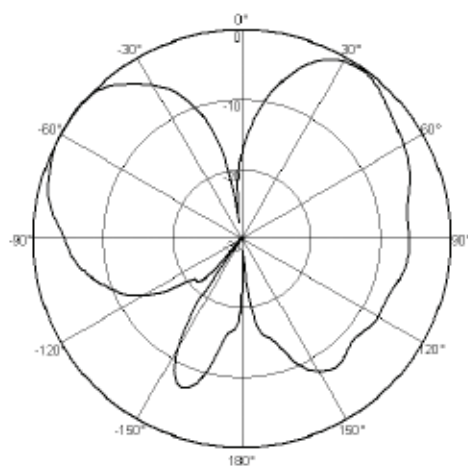
#### Omnidirectional Antenna

This aesthetically pleasing antenna features six integrated 2.4–5 GHz dual-band omnidirectional antennas, ideal for placing antenna below ceiling tiles in conference rooms, hotels and access point above.

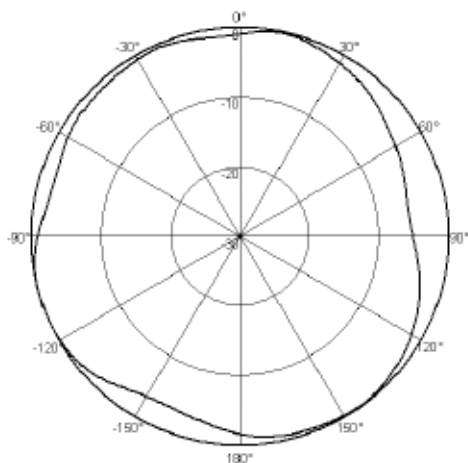
- Compatible with all 3x3 MIMO APs and 802.11n, 11ac and wave-2 applications.
- This antenna has 6 RP-SMA connectors with attached cables.



**Frequency  
2500 MHz**

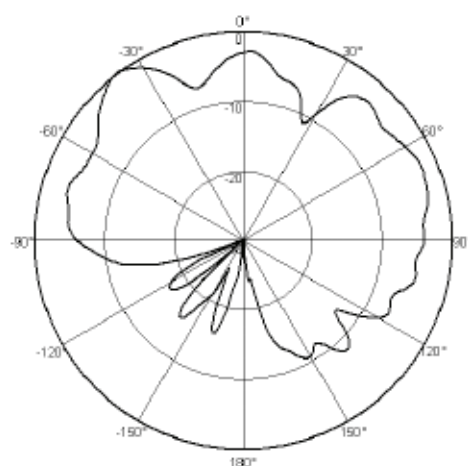


**E-Plane Pattern**

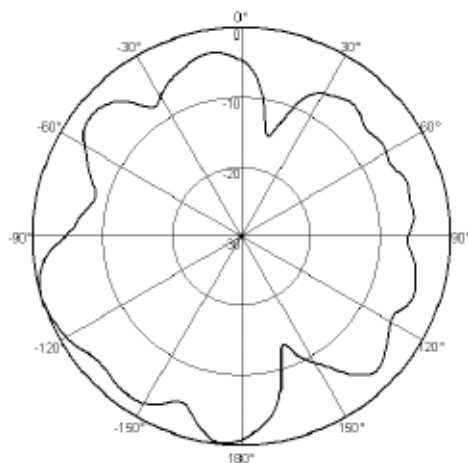


**H-Plane Pattern**

**Frequency  
5500 MHz**



**E-Plane Pattern**



**H-Plane Pattern**



## HIGHLIGHTS

### ANT-I3ABGN-0304-O

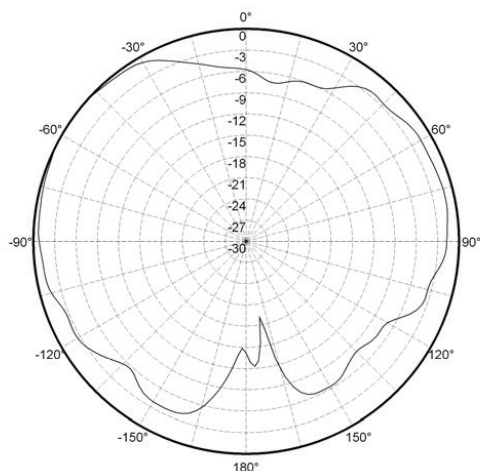
#### Ceiling-Mount Omnidirectional Antenna for Indoor Use

The ANT-I3ABGN-0304-O is a dual-band, ceiling-mount omnidirectional antenna, designed to operate indoors.

The dual-band frequency coverage means that a single type of antenna can be deployed with any radio in the 2.4–2.5 GHz or 5.1–5.850 GHz bands. The 18" plenum pigtails have dual-band leads that support both 2.4 and 5 GHz with RPSMA connectors.

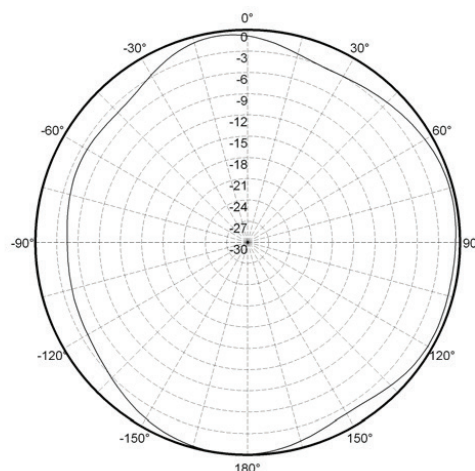


**E-Plane Pattern**

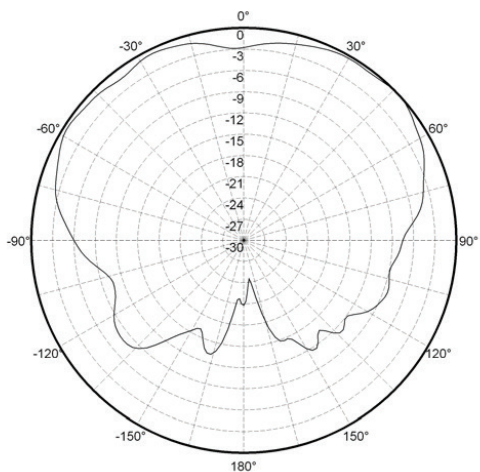


**Frequency  
2500 MHz**

**H-Plane Pattern**

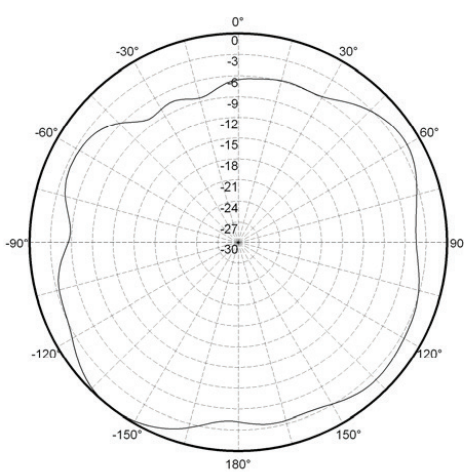


**E-Plane Pattern**



**Frequency  
5500 MHz**

**H-Plane Pattern**



## HIGHLIGHTS

### ANT-O6ABGN-0606-O

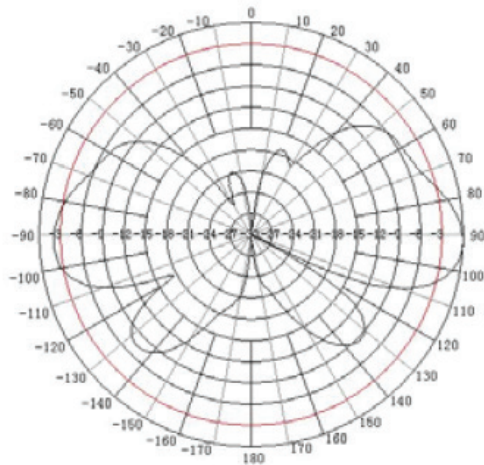
#### External MIMO Omnidirectional Antenna

The ANT-O6ABGN-0606-O is an outdoor dual-band 6-element omnidirectional antenna for use in 3x3 802.11n/ac/ wave-2 MIMO applications. Housed in a ruggedized fiberglass enclosure, the antenna can be mounted to a wall, beam, or mast. Each of the six MIMO antenna elements is connected to a separate low loss, plenum rated, coax pigtail.

The radiation patterns are uniform and symmetrical, providing high levels signal density into wide spaces such as a warehouse or a manufacturing facility. This antenna will greatly enhance the performance of 802.11 MIMO systems. The dual-band frequency coverage means that a single type of antenna can be deployed with any MIMO radio in the 2.4–2.5 GHz or 5.150–5.850 GHz bands.

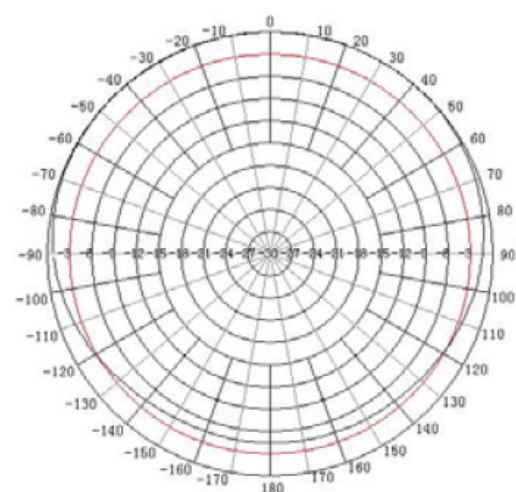


E-Plane Pattern

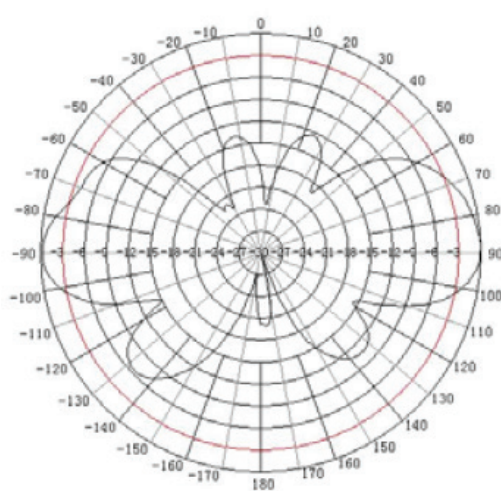


Frequency  
2500 MHz

H-Plane Pattern

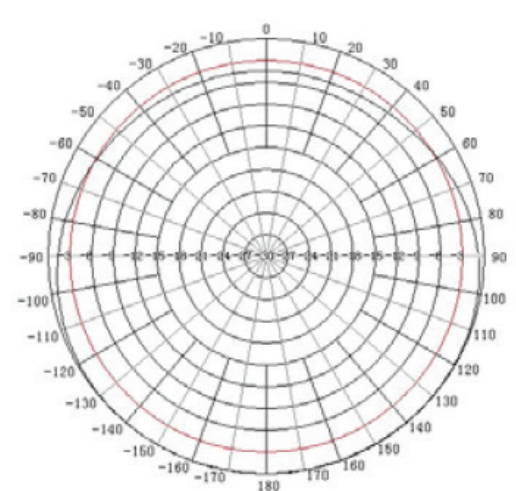


E-Plane Pattern



Frequency  
5500 MHz

H-Plane Pattern





## HIGHLIGHTS

### ANT-O6ABGN-0607-PT

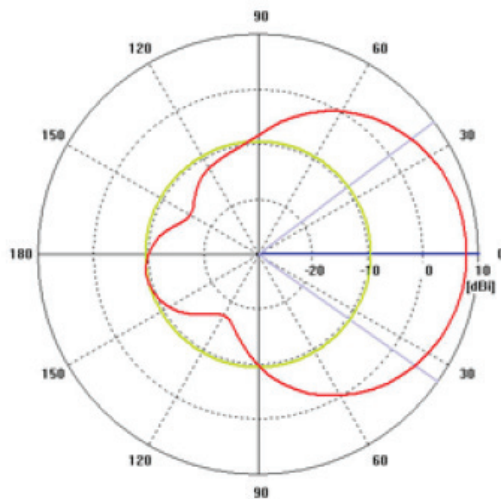
#### External MIMO Patch Antenna

The ANT-O6ABGN-0607-PT is a dual-band 3-patch antenna for use in 802.11n MIMO applications. Housed in a low-profile Radome, the antenna can be mounted to a wall or mast, indoors or outdoors. Each of the three MIMO antenna elements is connected to a separate low loss, plenum rated, coax pigtail.



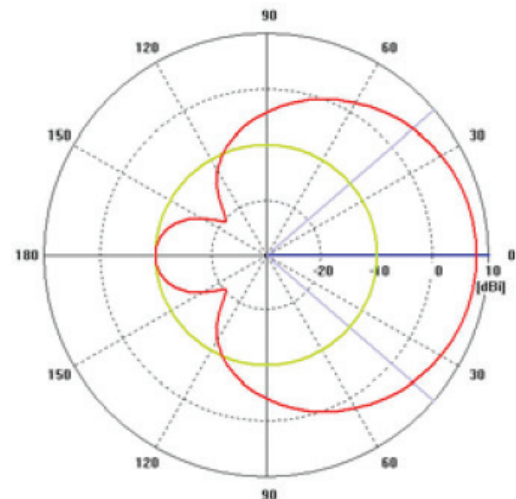
The radiation patterns are uniform and symmetrical, providing high levels signal density into defined coverage zones. This antenna will greatly enhance the performance of 802.11 systems. The dual-band frequency coverage means that a single type of antenna can be deployed with any MIMO radio in the 2.4–2.5 GHz or 5.1–5.850 GHz bands.

**E-Plane Pattern**

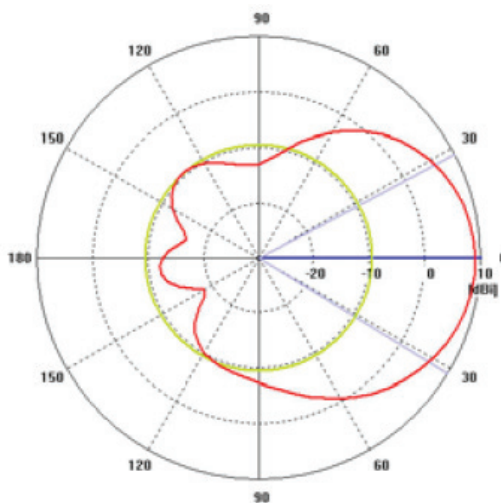


**Frequency  
2500 MHz**

**H-Plane Pattern**

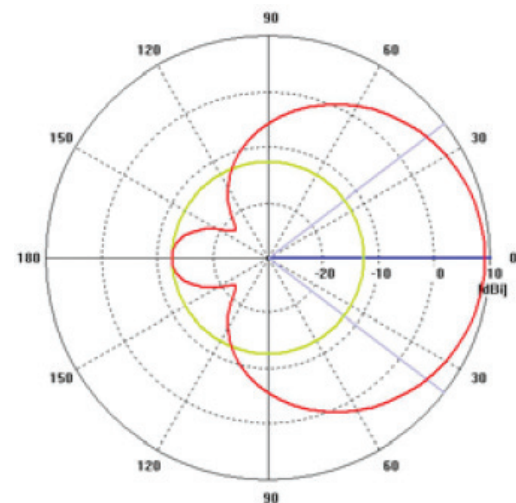


**E-Plane Pattern**



**Frequency  
5500 MHz**

**H-Plane Pattern**

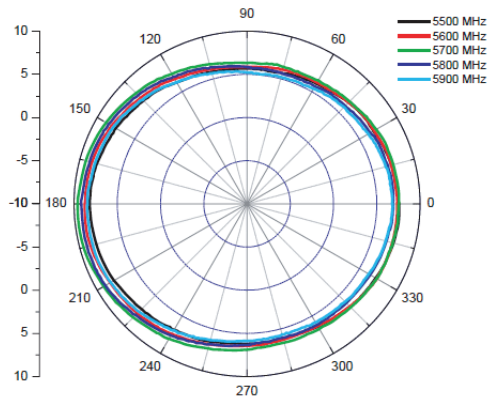


## HIGHLIGHTS

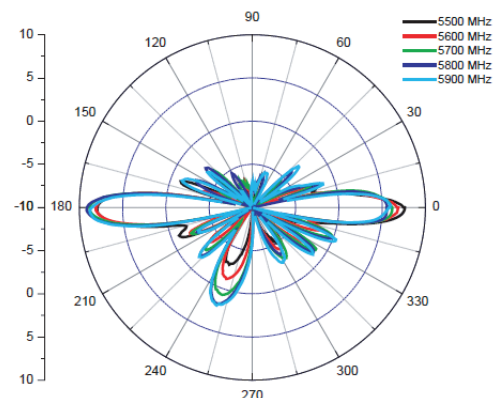
### ANT-A080-NM-2

#### Omnidirectional Antenna for 5 GHz

This omnidirectional antenna provides 360° coverage for standard outdoor deployments.



H-Plane



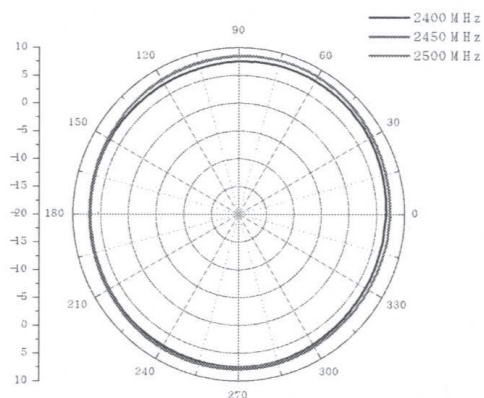
E-Plane



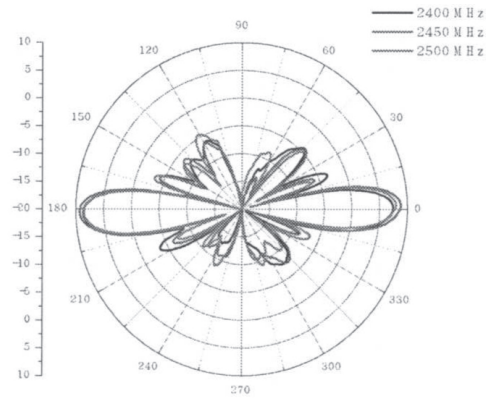
### ANT-BG080-NM

#### Omnidirectional Antenna for 2.4 GHz

This omnidirectional pole-mounted antenna provides 360° coverage for standard outdoor deployments.



H-Plane



E-Plane

# SPECIFICATIONS

	FORTIANTENNA 612R	FORTIANTENNA 612N	FORTIANTENNA 500N
<b>Electrical</b>			
Frequency Range	2.4–2.5 GHz and 4.9–5.9 GHz (dual band)	2.4–2.5 GHz and 4.9–5.9 GHz (dual band)	4.9–5.9 GHz
Gain	2x 6 dBi	2x 6 dBi	2x 20 dBi
Beam Width Horizontal	120°	120°	12°
Beam Width Vertical	60°	60°	12°
Maximum Input Power	20 W	20 W	10 W
Input Impedance	50 Ohm	50 Ohm	50 Ohm
VSWR	1.5:1 typical	1.5:1 typical	1.7:1 typical
<b>Mechanical</b>			
Dimension (Height x Width x Diameter)	7.9 x 7.9 x 1.25 inches (200 x 200 x 33 mm)	7.9 x 7.9 x 1.25 inches (200 x 200 x 33 mm)	12 x 12 x 1.6 inches (305 x 305 x 15 mm)
Weight	9.2 oz (260 grams)	9.2 oz (260 grams)	2 lbs (900 grams)
Cable Length	2x 1.2 meter Coaxial Cable RG 316 White	2x 1.2 meter Coaxial Cable RG 316 White	N/A
Connector	RP-SMA-Type male connectors	N-Type male connectors	N-Type female connectors
Mount	Wall mount	Wall and pole mount with optional FAN-M22 mount kit	Wall and pole mount with optional FAN-M22 mount kit
Radome	UV Protected Polycarbonate	UV Protected Polycarbonate	UV Protected Polycarbonate
<b>Environmental</b>			
Operating and Storage Temperature Range	-40–158°F (-40–70°C)	-40–158°F (-40–70°C)	-67–149°F (-55–65°C)
Wind Load	N/A	N/A	(with FortiAntenna M22) 200 km/h
Water Proof Rating	IP65	IP65	IP67
Salt Fog	N/A	N/A	According to IEC 68-2-11
Vibration	According to IEC 60721-3-4	According to IEC 60721-3-4	According to IEC 60721-3-4
Flammability	UL94	UL94	UL94
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	ETS 300 019-1-4, EN 302 085 (annex A.1.1)
<b>Warranty</b>			
Standard Warranty	1 year	1 year	1 year

\* Certified in US and Canada. For other regions, contact your local Fortinet representative.

	FORTIANTENNA 504N	FORTIANTENNA 614R	FORTIANTENNA 664N
<b>Electrical</b>			
Frequency Range	4.9–6.425 GHz	2.3–2.7 GHz and 4.9–6.1 GHz (dual band)	2.4–2.5 GHz and 5.15–5.875 GHz (dual band)
Gain	4x 19 dBi	4x 5 dBi	4x 8 dBi
Beam Width Horizontal	19°	120°	60°
Beam Width Vertical	19°	70°	60°
Maximum Input Power	10 W	20 W	20 W
Input Impedance	50 Ohm	50 Ohm	50 Ohm
VSWR	1.7:1 typical	1.5:1 typical	2:1 typical
<b>Mechanical</b>			
Dimension (Height x Width x Diameter)	14.6 x 14.6 x 1.5 inches (370 x 370 x 40 mm)	7.9 x 7.9 x 1.25 inches (200 x 200 x 33 mm)	7.9 x 7.9 x 1.25 inches (200 x 200 x 33 mm)
Weight	70.55 oz (2 kg)	9.2 oz (260 grams)	17.64 oz (500 grams)
Cable Length	N/A	4x 1.2 meter Coaxial Cable RG 316 White	4x 75 cm Coaxial Cable RG 316 White
Connector	N-Type female	RP-SMA-Type male connectors	N-Type male
Mount	Wall and pole mount with optional FAN-M22 mount kit	Wall mount	Wall and pole mount with optional FAN-M22 mount kit
Radome	UV Protected Polycarbonate	UV Protected Polycarbonate	UV Protected Polycarbonate
<b>Environmental</b>			
Operating and Storage Temperature Range	-67–149°F (-55–65°C)	-40–158°F (-40–70°C)	-40–158°F (-40–70°C)
Wind Load	(with FortiAntenna-M22) 200 km/h	N/A	220 km/h
Water Proof Rating	IP67	IP65	IP67
Salt Fog	According to IEC 68-2-11	N/A	N/A
Vibration	According to IEC 60721-3-4	According to IEC 60721-3-4	According to IEC 60721-3-4
Flammability	UL94	UL94	UL94
Humidity	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	ETS 300 019-1-4, EN 302 085 (annex A.1.1)	ETS 300 019-1-4, EN 302 085 (annex A.1.1)
<b>Warranty</b>			
Standard Warranty	1 year	1 year	1 year

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## SPECIFICATIONS

	ANT-I3ABGN-0304-0	ANT-06ABGN-0606-0*	ANT-06ABGN-0607-PT*
<b>Electrical</b>			
Frequency range	2.4–2.5 and 5.1–5.850 GHz	2.4–2.5 and 5.150–5.850 GHz	2.4–2.5 and 5.1–5.850 GHz
Gain	3 dBi for 2.4–2.5 GHz / 4 dBi for 5.1–5.850 GHz	6 dBi for 2.4–2.5 GHz / 6 dBi for 5.150–5.850 GHz	6 dBi for 2.4–2.5 GHz / 7 dBi for 4.9–5.850 GHz
Beamwidth – Elevation	90°/160°	40° @ 2.4 GHz, 40° @ 5 GHz	72° @ 2.4 GHz, 60° @ 5 GHz
Beamwidth – Azimuth	360°	360° @ 2.4 GHz, 360° @ 5 GHz	82° @ 2.4 GHz, 75° @ 5 GHz
Maximum VSWR	≤2.0	1.5:1 for 2.4 GHz; 2.0:1 for 5 GHz	1.5:1 for 2.4 GHz; 2.0:1 for 5 GHz
Polarization	Vertical	Vertical	Vertical
Number of Leads	3	6	
Maximum Input Power	2 W	20 W	50 W
Lightning Protection	DC grounded		
<b>Environment &amp; Mechanical</b>			
Operating Temperature	-40–158°F (-40–70°C)		
Cable Length	18" plenum pigtails	3 ft.	3 ft.
Mounting Style	Ceiling mount	Wall/Beam/Mast mount with included hardware	Articulating for Wall/Mast
Connector Type	RP-SMA plug	RP-SMA	RP-SMA
Radome Material/Colour		Fiberglass	
<b>Dimensions</b>			
Height x Width x Length (inches)	5.9 x 2.9 x 1.0	6.0 x 7.02	17.5 x 6.02 x 1.0
Height x Width x Length (mm)	150 x 73.7 x 25.4	152.4 x 180.4	444.5 x 155.0 x 25.4
Weight	1.55 lbs (0.703 kg)	3.74 lbs (1.70 kg)	1.9 lbs (0.86 kg)
<b>Warranty</b>			
Standard Warranty	1 year	1 year	1 year

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	ANT-A080-NM-2	ANT-BG080-NM	ANT-6ABGN-24
<b>Electrical</b>			
Frequency range	5470–5875 MHz	2400–2500 MHz	2400–2483 and 5150–5850 MHz
Gain	8 dBi	8 dBi	2.5 dBi for 2400–2483 MHz 4 dBi for 5150–5850 MHz
Beamwidth – Elevation	12°	15°	55°/60°
Beamwidth – Azimuth	360°	360°	360°/360°
Maximum VSWR	2.0:1	2.0:1	2.0 Max for 2400–2483 MHz 2.5 Max for 5150–5850 MHz
Polarization	Linear, vertical	Linear, vertical	Vertical
Impedance	50 Ohms	50 Ohms	50 Ohms
Maximum Input Power			
Lightning Protection		DC ground	
<b>Environment &amp; Mechanical</b>			
Operating Temperature	-40–176°F (-40–80°C)	-40–176°F (-40–80°C)	-22–158°F (-30–70°C)
Humidity	95% @ 55°C	95% @ 55°C	
Cable Length			3 ft. (915mm Plenum)
Mounting Style			Ceiling
Connector Type	N Male	N plug	RP-SMA plug
Radome Material/Colour	Fiberglass, UV resistant / Gray-White	Fiberglass / Gray-White	
<b>Dimensions</b>			
Height x Width x Length (inches)			7.1 x 5.1 x 1.9
Height x Width x Length (mm)	22 x 325	21 x 580	180 x 130 x 50
Weight	.24 lbs (110g)	.36 lbs (164 g)	0.68 lbs (0.31 kg)
<b>Warranty</b>			
Standard Warranty	1 year	1 year	1 year

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## ORDER INFORMATION

Product	SKU	Description
FortiAntenna 612R	FAN-612R	Directional 120° dual-band outdoor panel antenna. Includes two 120cm cables with RP-SMA connectors.
FortiAntenna 612N	FAN-612N	Directional 120° dual-band outdoor panel antenna. Includes two 120cm cables with N connectors.
FortiAntenna 500N	FAN-500N	Panel antenna for 5 GHz Point-to-point bridging with N connectors. ~21dBi gain. Cables not included.
FortiAntenna 504N	FAN-504N	19 dBi gain panel antenna for 5 GHz Point-to-point 4x4 MIMO bridging with N-type connectors. Please purchase FAN-M22 wall/pole mount kit and LMR400 cables separately.
FortiAntenna 614R	FAN-614R	Directional 120° 5 dBi wall-mount outdoor 4x4 MIMO sector panel antenna. Includes 4x 1.2 m cables with RP-SMA connectors. (wall mountable, mount kit not supported)
FortiAntenna 664N	FAN-664N	60° 8 dBi dual-band 4x4 MIMO sector panel antenna. Includes 75 cm cables with 4 N-type connectors. Purchase FAN-M22 wall/pole mount kit separately.
Antenna Mount	FAN-M22	Pole/wall mount kit for FortiAntenna 500N, 504N, 612N and 614N.
Fortinet Antennas	ANT-6ABGN-24	Spare: External paddle antenna to be shipped with AP822e. Quantity 1 only.
	ANT-I3ABGN-0304-O	Dual-band 3x3 MIMO ceiling-mount antenna for AP822e, AP433e and AP832e, 3 dBi at 2.4 GHz, 4 dBi at 5 GHz. Three RP-SMA plug connectors with 18 inch / 45 cm cable.
	ANT-O6ABGN-0606-O	Outdoor Dual-band 2x 3-Element Omnidirectional Antenna with 6 leads, 6 dBi at 2.4 GHz, 6 dBi at 5 GHz. For OAP433e, AP822e and AP832e (OAP433e requires N-type to RPSMA adapters).
	ANT-O6ABGN-0607-PT	Dual Band Patch 6-lead Antenna for MIMO Applications. Features three integrated 2.4 GHz patch antennas and three integrated 5 GHz patch antennas. 6 dBi at 2.4 GHz, 7 dBi at 5 GHz. For AP433e, AP822e, AP832e and OAP433e (OAP433e requires N-Type to RP-SMA adapters).
	ANT-A080-NM-2	802.11a/n 8 dBi Omnidirectional Antenna, 5470–5875 MHz (N-Male) for OAP433e.
	ANT-BG080-NM	802.11 b/g/n 8 dBi Omnidirectional Antenna 2400–2500 MHz (N-Male) for OAP433e.
Patch Cables	CBL3-1NMRPMSMA	1 Foot RF Patch Cable: RP-SMA-MALE to N-MALE, Plenum rated.
	CBL3-1RPXSMA	1 Foot RF Extension Cable: RP-SMA-MALE to RP-SMA-FEMALE, Plenum rated.
	CBL3-3NMRPMSMA	3 Foot RF Patch Cable: RP-SMA-MALE to N-MALE, Plenum rated.
	CBL3-3RPXSMA	3 Foot RF Extension Cable: RP-SMA-MALE to RP-SMA-FEMALE, Plenum rated.



GLOBAL HEADQUARTERS  
Fortinet Inc.  
899 KIFER ROAD  
Sunnyvale, CA 94086  
United States  
Tel: +1.408.235.7700  
[www.fortinet.com/sales](http://www.fortinet.com/sales)

EMEA SALES OFFICE  
905 rue Albert Einstein  
06560 Valbonne  
France  
Tel: +33.4.8987.0500

APAC SALES OFFICE  
300 Beach Road 20-01  
The Concourse  
Singapore 199555  
Tel: +65.6395.2788

LATIN AMERICA SALES OFFICE  
Sawgrass Lakes Center  
13450 W. Sunrise Blvd., Suite 430  
Sunrise, FL 33323  
United States  
Tel: +1.954.368.9990

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